

# Key Technical Data

**NETZSCH**

TG 209 F1 Libra®	
Design	Top-loading
Temperature range	(10°C) RT to 1100°C
Heating rate	0.001 K/min to 200 K/min
Cooling time	In nitrogen: ≈ 12 min from 1100°C to 100°C In helium <sup>1</sup> : ≈ 5 min from 1000°C to 100°C
Max. sample weight/ measuring range	2 g (including crucible)
TGA resolution	0.1 µg
Motorized sensor	Motorized sensor for easy and safe handling
Interchangeable sample carriers	For standard applications, high-volume samples and large masses; high sensitivity for functions such as <i>c-DTA</i> ®; special coatings for high resistance to corrosive gases
Vacuum-tightness	10 <sup>-2</sup> mbar (1 Pa)
Gas atmospheres	Inert, oxidizing, reducing, measurements under vacuum (for tests such as rubber analysis)
Gas flow control	Three integrated mass flow controllers for purge and protective gases
<i>AutoVac</i>	Automatic evacuation and refilling of purge gas (optional)
Temperature calibration	<i>c-DTA</i> ®, also for detection of endo- and exothermal effects; Curie standards
Crucibles	Pt, Al <sub>2</sub> O <sub>3</sub> , Au, SiO <sub>2</sub> , Ag, ZrO <sub>2</sub> , Al, etc.; more upon request.
Automatic sample changer (ASC)	Up to 192 samples (optional); various crucible types in one tray
Software	<ul style="list-style-type: none"> <li>■ Comprehensive evaluation routines including <i>SmartMode</i>, <i>ExpertMode</i>, <i>AutoCalibration</i> and <i>TGA-BeFlat</i>®</li> <li>■ <i>AutoEvaluation</i> and <i>Identify</i></li> <li>■ <i>SuperRes</i>® (optional)</li> </ul>
Coupling to evolved gas analysis (EGA)	Optional: FT-IR and/or MS or GC-MS, integrated FT-IR ( <i>PERSEUS</i> TG)

<sup>1</sup> 21°C chiller temperature, 200 ml/min He (purge + protective gas); the maximum temperature of the TGA system depends on the He gas flow: at 200 ml/min, T<sub>max</sub> is 1020°C.